

CLAIMS

1. A composition with desulfurization property in which the molecular sieves component with incorporation of vanadium into skeleton is used as
5 desulfurization component.

2. A composition according to claim 1 in which the composition comprises mainly supporter, binder, active component and molecular sieves component with incorporation of vanadium into skeleton.

3. A composition according to claim 1 or 2 in which the molecular sieves
10 component with incorporation of vanadium into skeleton is from 1 to 20 weight percent.

4. A composition according to claim 3 in which the molecular sieves component with incorporation of vanadium into skeleton is from 7 to 15 weight percent.

15 5. A composition according to claim 2 in which the ratio of active component to molecular sieves component with incorporation of vanadium into skeleton is from 1 to 50.

6. A composition according to claim 5 in which the ratio of active component to molecular sieves component with incorporation of vanadium into
20 skeleton is from 3 to 20.

7. A composition according to claim 1 or 2 in which the molecular sieves component with incorporation of vanadium into skeleton is selected from one or

mixture of more than one of VS-n, VAPO-n and VSAPO-n molecular sieves.

8. A composition according to claim 7 in which the VS-n molecular sieves is VS-1 or VS-2 and the molar ratio of Si to V is from 10 to 300.

9. A composition according to claim 7 in which the VAPO-n molecular
5 sieves is VAPO-5, VAPO-11, VAPO-17 or VAPO-31 and the molar ratio of Al to V is from 10 to 300.

10. A composition according to claim 2, 5 or 6 in which the active component includes large pore size or intermediate pore size zeolites.

11. A composition according to claim 2, 5 or 6 in which the active
10 component is zeolite Y and/or ZSM-5.

12. A composition according to claim 11 in which zeolite Y is USY or REUSY.

13. A composition according to claim 11 in which zeolite Y is modified by metal oxides.

15 14. A composition according to claim 13 in which the metal oxide is ZnO.

15. A composition according to claim 11 in which zeolite ZSM-5 is modified by rare earth.

16. A composition according to claim 11 in which zeolite ZSM-5 is modified by both P and rare earth.

20 17. A composition according to claim 2 in which the support is Kaolin.

18. A composition according to claim 2 in which the binder is selected from one or mixture of more than one of silica sol, alumina sol and pseudoboehmite.

19. A FCC catalyst with desulfurization property in which the molecular sieves component with incorporation of vanadium into skeleton is used as desulfurization component.

20. A catalyst according to claim 19 in which the catalyst comprises mainly supporter, binder, active component and molecular sieves component with incorporation of vanadium into skeleton.

21 A catalyst according to claim 19 or 20 in which the molecular sieves component with incorporation of vanadium into skeleton is from 1 to 20 weight percent.

22. A catalyst according to claim 21 in which the molecular sieves component with incorporation of vanadium into skeleton is from 7 to 15 weight percent.

23. A catalyst according to claim 20 in which the ratio of active component to molecular sieves component with incorporation of vanadium into skeleton is from 1 to 50.

24. A catalyst according to claim 23 in which the ratio of active component to molecular sieves component with incorporation of vanadium into skeleton is from 3 to 20.

25. A catalyst according to claim 19 or 20 in which the molecular sieves component with incorporation of vanadium into skeleton is selected from one or mixture of more than one of VS-n, VAPO-n and VSAPO-n molecular sieves.

26. A catalyst according to claim 25 in which the VS-n molecular sieves is VS-1 or VS-2 and the molar ratio of Si to V is from 10 to 300.

27. A catalyst according to claim 25 in which the VAPO-n molecular sieves is VAPO-5, VAPO-11, VAPO-17 or VAPO-31 and the molar ratio of Al to V is from 10 to 300.

28. A catalyst according to claim 20, 23 or 24 in which the active component includes large pore size or intermediate pore size zeolites widely used in FCC catalyst.

29. A catalyst according to claim 20, 23 or 24 in which the active component is zeolite Y and/or ZSM-5.

30. A catalyst according to claim 29 in which zeolite Y is USY or REUSY

31. A catalyst according to claim 30 in which zeolite Y is modified by metal oxides.

32. A catalyst according to claim 31 in which the metal oxide is ZnO.

33. A catalyst according to claim 29 in which zeolite ZSM-5 is modified by rare earth.

34. A catalyst according to claim 29 in which zeolite ZSM-5 is modified by both P and rare earth.

35. A catalyst according to claim 20 in which the supporter is Kaolin.

36. A catalyst according to claim 20 in which the binder is selected from one or mixture of more than one of silica sol, alumina sol and

pseudoboehmite.

37.A process for reducing the content of sulfur compound, which is conducted in the presence of the composition of claim 1.

38.A catalytic cracking method conducted in the presence of the FCC
5 catalyst of claim 19, in which in said catalyst the molecular sieves component with incorporation of vanadium into skeleton is used as desulfurization component.